

WHAT IS CLAIMED IS:

- Sub
a1
1. A display device comprising:
 - a memory device-built-in pixel portion including a plurality of data lines and a plurality of scan lines arranged in a matrix, a plurality of pixels disposed on respective intersections of the both lines, a plurality of pixel switching elements electrically conducting the data lines and the pixels based on scan signals supplied to the scan lines to write graphic data supplied to the data lines into the pixels, and a plurality of memory devices storing the graphic data supplied to the data lines and being constituted to be capable of supplying the graphic data stored to the pixels corresponding thereto;
 - a data driver and a scan driver for controlling the write of the graphic data supplied to the data lines into the pixels in order to perform a first display;
 - a memory device driver for controlling the write of the graphic data held in the memory devices into the pixels in order to perform a second display;
 - a power source voltage generating unit for supplying a power source voltage to the data driver and the scan driver; and
 - a power source voltage control circuit for stopping a supply of the power source voltage from the power source voltage generating unit during a period of the second display.
 2. The display device according to claim 1,
 - wherein the power source voltage control circuit stops the supply of the power source voltage from the power source voltage generating unit to the data driver during the period of the second display.
 3. The display device according to claim 1,
 - wherein the power source voltage control circuit stops the supply of the power source voltage from the power source voltage generating unit to the data driver and the scan driver during the period of the second display.
 4. The display device according to claim 1,
 - wherein the power source voltage control circuit is constituted of a TFT switch and electrically disconnects the power source voltage generating unit and the data driver based on a mode switching signal supplied from an external control circuit during the period of the second display.
 5. The display device according to claim 3,
 - wherein the power source voltage control circuit is constituted of a TFT switch and electrically disconnects the power source voltage generating unit, the data driver and the scan driver based on a mode switching signal supplied from an external control circuit

during the period of the second display.

6. The display device according to claim 1,
wherein the power source generating unit is a DC/DC converter.

7. The display device according to claim 1,

5 wherein each of the pixels is a liquid crystal pixel having a liquid crystal layer held between a pixel electrode and an opposite electrode.

8. The display device according to claim 1,
wherein each of the memory devices is an SRAM.

9. The display device according to claim 8,

10 wherein the SRAM includes two inverters and one SRAM switching element.

10. A display device comprising:

a memory device-built-in pixel portion including a plurality of data lines and a plurality of scan lines arranged in a matrix, a plurality of pixels disposed on respective intersections of the both lines, a plurality of pixel switching elements electrically
15 conducting the data lines and the pixels based on scan signals supplied to the scan lines to write graphic data supplied to the data lines into the pixels, and a plurality of memory devices storing the graphic data supplied to the data lines and being constituted to be capable of supplying the graphic data stored to the pixels corresponding thereto;

a data driver and a scan driver for controlling the write of the graphic data
20 supplied to the data lines into the pixels in order to perform a first display;

a memory device driver for controlling the write of the graphic data held in the memory devices into the pixels in order to perform a second display;

a power source voltage generating unit for supplying a power source voltage to the data driver and the scan driver; and

25 a power source voltage generating and stopping circuit for stopping generation of the power source voltage in the power source voltage generating unit during a period of the second display.

11. The display device according to claim 10,

30 wherein the power source voltage generating and stopping circuit stops the generation of the power source voltage supplied to the data driver.

12. The display device according to claim 10,

wherein the power source voltage generating and stopping circuit stops the generation of the power source voltages supplied to the data driver and the scan driver.

13. The display device according to claim 10,

35 wherein the power source voltage generating unit includes a switching boosting

unit for boosting an input voltage, an output smoothing unit for smoothing the voltage boosted in the switching boosting unit to set the voltage as an output voltage, a comparator for controlling a boosting operation of the switching boosting unit in response to a comparison result of the output voltage with a reference voltage, and a power source voltage generating and stopping circuit connected between the comparator and the switching boosting unit, and

the power source voltage generating and stopping circuit stops the boosting operation in the switching boosting unit by electrically disconnecting the switching boosting unit and the comparator during the period of the second display.

10 14. The display device according to claim 13,

wherein the power source voltage generating and stopping circuit receives the comparison result outputted from the comparator and a mode switching signal supplied from an external control circuit as inputs thereto, and stops a supply of the comparison result to the switching boosting unit in response to a potential level of the mode switching signal.

15 15. The display device according to claim 14,

wherein the power source voltage generating and stopping circuit is constituted of an AND circuit receiving the comparison result outputted from the comparator and the mode switching signal supplied from the external control circuit as input signals thereto, and stops a supply of a comparison result outputted from the comparator to the switching boosting unit during the period of the second display when a potential of the mode switching signal is set at a low level.

20 16. The display device according to claim 10,

wherein the power source voltage generating unit is a DC/DC converter.

25 17. The display device according to claim 10,

wherein each of the pixels is a liquid crystal pixel having a liquid crystal layer held between a pixel electrode and an opposite electrode.

18. The display device according to claim 10,

wherein each of the memory devices is an SRAM.

30 19. The display device according to claim 18,

wherein the SRAM includes two inverters and one SRAM switching element.